Test: Energy Transfer in a Food Chain

Part A: True or False

Directions: Write **T** or **F**

1. _____ Producers obtain their energy directly from the Sun.
2. _____ Energy increases as it moves up a food chain.
3. _____ Consumers must obtain energy by eating other organisms.
4. _____ Decomposers help recycle nutrients back into the ecosystem.
5. _____ A food chain shows the movement of energy through organisms.
6. _____ Plants are considered primary consumers.
7. _____ Most energy is lost as heat at each trophic level.
8. _____ Herbivores eat producers.
9. _____ Energy is recycled in ecosystems over and over again.
10. _____ The Sun is the main source of energy for most food chains.

Part B: Multiple Choice: Directions: Circle the best answer.

11. What is the original source of energy for most food chains?
    - A. Water
    - B. Soil
    - C. The Sun
    - D. Air
12. Which organism is a producer?
    - A. Rabbit
    - B. Grass
    - C. Hawk
    - D. Snake
13. What is a primary consumer?
    - A. An organism that eats producers
    - B. An organism that makes its own food
    - C. An organism that eats other consumers
    - D. An organism that breaks down dead matter

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14. Which of the following is a secondary consumer?
    - A. Grass
    - B. Deer
    - C. Frog
    - D. Tree
15. Why does less energy reach higher levels of a food chain?
    - A. Energy is destroyed.
    - B. Organisms use energy for life processes.
    - C. Producers take all the energy.
    - D. Consumers do not need energy.
16. Which organism would most likely be a tertiary consumer?
    - A. Grass
    - B. Grasshopper
    - C. Frog
    - D. Hawk
17. Approximately what percentage of energy is transferred to the next trophic level?
    - A. 1%
    - B. 10%
    - C. 50%
    - D. 100%
18. Which organism acts as a decomposer?
    - A. Mushroom
    - B. Rabbit
    - C. Hawk
    - D. Grass
19. In the food chain Grass → Rabbit → Fox, the rabbit is a:
    - A. Producer
    - B. Secondary Consumer
    - C. Primary Consumer
    - D. Decomposer
20. What happens to most of the energy that is not transferred?
    - A. It is stored forever.
    - B. It becomes sunlight.
    - C. It is lost as heat.
    - D. It disappears completely.

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Part C: Matching: Directions: Match the term in Column A with the correct answer in Column B.

Column A	Column B
21. ____ Producer	A. Organism that eats only plants
22. ____ Primary Consumer	B. Main source of energy for most ecosystems
23. ____ Secondary Consumer	C. Organism that breaks down dead organisms
24. ____ Decomposer	D. Organism that eats a primary consumer
25. ____ Food Chain	E. Diagram showing how much energy is available at each level
26. ____ Tertiary Consumer	F. Organism that makes its own food
27. ____ Energy Pyramid	G. Sequence showing the flow of energy through organisms
28. ____ Herbivore	H. Organism that eats a secondary consumer
29. ____ Carnivore	I. Organism that eats only animals
30. ____ Sun	J. Organism that eats producers

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